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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/634,908 08/09/00 TOBACK

A TOB/101/US

EXAMINER

002543
ALIX YALE & RISTAS LLP
750 MAIN STREET
SUITE 600
HARTFORD CT 06103

PM82/0330

VARNER, S
ART UNIT

PAPER NUMBER

3635
DATE MAILED:

03/30/01

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/634,908

Applicant(s)

TOBACK, ALEX S.

Examiner

Steve M Varner

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waud in view of Dixon et al., Duffy et al., Nystrom, Wallace, and Regensburger.

Regarding claim 1, Waud teaches a threaded fastener with stabilizing threads. It has a head means and a drive means. (Fig. 1) Waud teaches a proximal portion with a first diameter and a distal portion with a second diameter. (Fig. 1) It has a helical first thread on the proximal portion and a helical second thread on the distal portion. (Fig. 1) Waud teaches a self-drilling distal end with material transfer means within the second diameter. Waud does not teach a coating over the shank proximal portion. Nystrom teaches an adhesive coating on the top of the proximal portion. (Col. 3, Line 55-60) It would be obvious to modify Waud with the adhesive coating of Nystrom to seal the fastener in its hole.

Regarding claim 2, Waud does not teach the coating of adhesive in micro-encapsulated form. Wallace teaches thread lock. A two-part adhesive is micro-encapsulated to form a bond when the threads engage the hole. It would have been an obvious design choice to use the thread lock micro-encapsulation in the structure of Waud to bind the threads with the hole.

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Regarding claim 3, Waud teaches radial extending wings from the shank distal portion. (Fig. 1)

Regarding claim 4, Waud does not show a carbide drill point. Regensburger shows a hole-drilling self-tapping screw. It has a carbide drill bit. (Abstract) It would have been obvious to use a carbide drill bit as in Regensburger in the structure of Waud since carbide is a strong material for a drill bit.

Regarding claim 5, Waud teaches first and second threads as buttress threads. (Fig. 1)

Regarding claim 6, Waud teaches thread crest diameters which are equal over the length of the respective threads. (Fig. 1)

Regarding claim 7, it is an obvious design choice for the coating to be a polymer since this would act to bond the threads with the hole.

Regarding claim 8 and 9, Waud does not teach a protuberance. Dixon et al. teaches a helical protuberance extending helically between adjacent convolutions of the first or second threads. (Fig. 1) Dixon et al. teaches the protuberance with a crest diameter less than that of adjacent convolutions. (Fig. 1) It would have been obvious to one of ordinary skill in the art to modify Waud with the protuberance of Dixon et al. to ease entry of the fastener into the material.

Regarding claim 10, see claim 1. Waud does not disclose a resin bead. Duffy et al. teaches a resin-coated fastener and apparatus and method for manufacture of it. It would have been obvious to one of ordinary skill in the art to degrade Duffy et al. into a

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bead instead of a coating and apply it in the structure of Waud since this would form a tighter bond between the fastener and the hole.

Regarding claims 11-14, Waud does not show a hardener, resin and nylon powder bead in a cardioid-shaped configuration around the fastener. He does not teach the bead at 30% nylon powder where the bead is made of 5 milliliters of resin, hardener, and nylon powder each. Wallace shows a two-part adhesive of resin, hardener, and nylon powder. (Col. 2, Line 25-50) This is used for thread lock. It would have been obvious to one of ordinary skill in the art to employ the adhesive of Wallace in a bead of cardioid shape in the structure of Waud for the purpose of locking the threads. It would have been obvious to degrade the structure of Wallace into a cardioid-shaped bead. The percentage of nylon powder and amount of resin, hardener, and nylon powder are obvious design choices, which make a strong thread lock.

Regarding claim 15, see claim 2.

Regarding claim 16, see claim 3.

Regarding claim 17, see claim 4.

Regarding claim 18, see claim 5.

Regarding claim 19, Waud teaches a uniform axial spacing. (Fig. 1) The extension of the proximal portion and first intermediate portion is an obvious design choice.

Regarding claim 20, see claim 10.

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The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Daubinger et al. teaches a self-drilling screw. Takasaki presents a wood screw. Toback et al. shows a metal panel fastener.

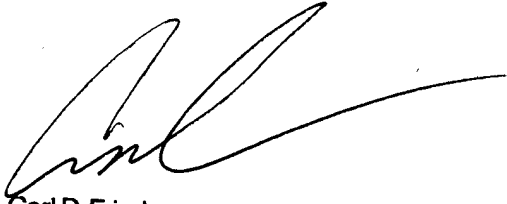
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve M Varner whose telephone number is 703 308-1894. The examiner can normally be reached on M-F 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D Friedman can be reached on 703 308-0839. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-7687 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-1113.

SV
March 21, 2001


Carl D. Friedman
Supervisory Patent Examiner
Group 3600